

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today
(1) was not written for publication in a law journal and
(2) is not binding precedent of the Board.

Paper No. 16

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte GIRISH K. CHITNIS and
JOCELYN A. KOWALSKI

Appeal No. 96-2479
Application 08/091,428¹

ON BRIEF

Before KIMLIN, GARRIS, and OWENS, Administrative Patent Judges.

GARRIS, Administrative Patent Judge.

DECISION ON APPEAL

¹ Application for patent filed July 15, 1993. According to appellants, this application is a division of Application 07/918,772, filed July 27, 1992, now U.S. Patent No. 5,258,341, issued November 2, 1993; which is a continuation of Application 07/636,834, filed January 2, 1991, now abandoned.

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This is a decision on an appeal from the refusal of the examiner to allow claims 1 and 3 through 10 as amended subsequent to the final rejection. These are all of the claims remaining in the application.

The subject matter on appeal relates to a process for cracking a gas oil comprising contacting the gas oil under sufficient cracking conditions with a catalyst comprising yttrium containing ultrastable zeolite Y wherein the catalyst contains no intentionally added rare earth ions and wherein the zeolite Y contains no more than about 0.02 weight percent of rare earth elements. This appealed subject matter is adequately illustrated by independent claim 1 which reads as follows:

1. A process for cracking a gas oil, said process comprising contacting said gas oil under sufficient cracking conditions with a catalyst comprising yttrium containing ultrastable zeolite Y, said zeolite Y being essentially free of rare earth ions, wherein said cracking conditions include a temperature of from about 300EC to about 700EC, a pressure of from about 0.1 atmosphere (bar) to about 30 atmospheres and a weight hourly space velocity of from about 0.1 to about 20, wherein said catalyst contains at least 0.1 wt % yttrium, wherein said catalyst contains no intentionally added rare earth ions, and wherein said zeolite Y contains no more than about 0.02 wt % of rare earth elements as measured by elemental analysis.

The references relied upon by the examiner as evidence of

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obviousness are:

Gladrow et al.	4,287,048	Sep. 1, 1981
(Gladrow '048)		

Gladrow et al.	4,289,606	Sep. 15, 1981
(Gladrow '606)		

The claims on appeal are rejected under 35 U.S.C. § 103 as being unpatentable over Gladrow '048 or Gladrow '606.

We cannot sustain this rejection.

Each of the Gladrow patents teaches a catalytic cracking process which employs a catalyst comprising ultrastable zeolite Y which is disclosed as being substantially free of rare earth metals including yttrium.² According to Gladrow, substantially rare earth free means that the rare earth metal content of the zeolite will be less than about 1 weight percent. In these respects, see lines 54 through 64 in column 2 of Gladrow '048 and lines 52 through 62 in column 2 of Gladrow '606.

It is the examiner's basic position that "the catalyst

² As correctly indicated by the appellants, a standard definition of "rare earth" reflects that yttrium in fact is "not a rare earth element, [but] is found associated with the rare earths and is only separated with difficulty" (Hawley's Condensed Chemical Dictionary, 11th ed.)

teaching[s] of the [Gladrow] patents overlap the teachings instantly claimed" (answer, page 3). We recognize that each of these references teaches a cracking catalyst comprising ultrastable zeolite Y which may contain up to about 1 weight percent of yttrium. However, there is simply no basis for concluding that Gladrow's catalyst necessarily and inherently contains yttrium and rare earth elements within the weight percent ranges defined by appealed claim 1, namely, at least 0.1 weight percent yttrium and no more than about 0.02 weight percent of rare earth elements.

Stated otherwise, the record before us reflects that the aforementioned weight percent ranges defined by the appellants' independent claim would be achieved only by the deliberate manipulation of the yttrium content and the rare earth elements content of Gladrow's catalyst (rather than by the necessary and inherent presence of yttrium and rare earth impurities that may coexist with this catalyst).³ As correctly observed by the appellants and not contested by the

³ Our position on this matter is reinforced by the previously noted definition of "rare earth" which evinces that yttrium is only separated with difficulty from rare earths.

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examiner, the Gladrow patents contain no teaching or suggestion of such manipulation.

In light of the foregoing, we cannot sustain the examiner's section 103 rejection of claims 1 and 3 through 10 as being unpatentable over Gladrow '048 or Gladrow '606.

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The decision of the examiner is reversed.

REVERSED

	Edward C. Kimlin)	
	Administrative Patent Judge)	
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	Bradley R. Garris)	BOARD OF
PATENT)	
	Administrative Patent Judge)	APPEALS AND
)	INTERFERENCES
)	
)	
	Terry J. Owens)	
	Administrative Patent Judge)	

tdc

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